

Case Report: Wilms' Tumor

Sang Ngoc Nguyen*

Department of Oncology, Haiphong Children Hospital, Vietnam

*Corresponding author: Nguyen SN, Department of Oncology, Haiphong Children Hospital, Vietnam, Tel: 84 0913087202; E-mail: nguyennngocsangnhi@yahoo.com

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Introduction

NNT is a 4 years old boy, a second born in the family of three. He stays with both parents and brothers in Haiphong, Vietnam. NNT's pregnancy was unplanned and he was delivered through caesarian section. He was never admitted in neonatal intensive care unit and has no history of neonatal sepsis or jaundice. NNT was breastfed for one year and his developmental milestones are appropriate for age, and immunizations are up to date.

History of Presenting Complaint

NNT's parents started noticing a left sided mass, initially small but however became progressively large and asymmetrical. Prior the child had haematuria with frank blood and clots intermittently. The child would also cry on passing urine and they decided to bring him to Haiphong Children Hospital.

Physical Examination

The child was pink, well-nourished and afebrile. Blood pressure ranged from 110/65-125/75 mmHg. Weight: 15 kilograms, height 100 cm [1].

- CVS-heart sounds were normal.
- RS-equal chest expansion and air entry.
- GIT-the child was feeding well, no changes in bowel habits.
- GUT-haematuria

Past medical surgical and drug history

This was the first admission but after scan confirmed that it was a Wilms' tumor the child was commenced on chemotherapy to shrink the mass before surgery [2,3].

Palpation of the abdomen

The abdomen was soft and non-tender, right sided abdominal mass was felt which was freely mobile with smooth edges and it did not cross the midline, one could easily get above and below it.

Problems

- Right sided abdominal mass.
- Hypertension

Differential Diagnosis

- Wilms' Tumor
- Neuroblastoma
- Polycystic Kidney Disease

- Rhabdomyosarcoma

Investigations

Abdominal Scan revealed a solid mass with cystic areas in the lower upper quadrant arising from the right kidney and measuring 12 cm by 9 cm, appearances were consistent with a right Wilms' tumor [4].

- Full blood count: WBC-3.27
- HB-8.5 (Low)
- MCV-58.7
- PLT-254
- Urea and electrolytes: Na-140
- K-3.8
- Urea-4.7
- Creatinin-35
- Urinalysis: Normal

Plan

- Admit the child
- Cross match and transfuse intra or post-operative
- For right nephrectomy
- Nil per oral
- Ceftriaxone 500 mg intravenously 12 hourly
- Metronidazole 100 mg intravenously 8 hourly

Procedure Done, Findings and Post Management

The child was taken for nephrectomy in theatre under general anaesthesia. Right sided renal mass was resected. After surgery the child was taken to PICU on nil orally for 24 hours, ringer lactate 56 mls hourly for 24 hours, rocephin 500 mg intravenously 12 hourly, metronidazole 100 mg iv 8 hourly, ketamine infusion 1-2 mls per hour for pain, post-operative FBC and U&E, strict intake and output targeting urine output of 10 mls per hour, oxygen per face mask and routine monitoring of vital signs [5]. NNT recovered well in PICU and was discharged back to ward after three days where he stayed for seven days. He came for review and the child was doing well, histology results of the resected mass further confirmed a Wilms' tumour [5].

Discussion

Wilms tumours are usually found when they start to cause symptoms such as swelling in the abdomen (belly), but by this point they have often grown quite large. They can be found earlier in some children with tests such as an ultrasound of the abdomen. If a child has signs or symptoms that suggest he or she may have a kidney tumour, the doctor will want to get a complete medical history to learn

more about the symptoms and how long they have been there. The family history of cancer or birth defects is also vital. The focus will probably be on the abdomen (belly) and on any increase in blood pressure, which is another possible sign of a kidney tumour. Blood and urine samples might also be collected for testing. If the doctor thinks a child might have a kidney tumour, he or she will probably get one or more of the imaging tests. These tests use sound waves, x-rays, magnetic fields, or radioactive substances to create pictures of the inside of the body. Imaging tests are done for a number of reasons, including:

- To help find out if there is a tumor in the kidney(s), and if so, if it is likely to be a Wilms tumor
- To learn if and how far the tumor has spread, both in the kidney and to other parts of the body
- To help guide surgery or radiation therapy
- To look at the area after treatment to help determine if it has worked.

Summary

Screening for Wilms tumour is very important for children who have syndromes or birth defects known to be linked to this disease. For

these children physical exams by a specialist and ultrasound exams on a regular basis are recommended (for example, about every 3 or 4 months at least until the age of 8) to find any kidney tumours when they are still small and have not yet spread to other organs.

Wilms' tumour can also run in families, although this is rare, testing can be done on parents to see if they have passed the mutation on to their children.

References

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